# CLAIMS

1. A plasma generating electrode comprising at least two opposing plate-shaped unit electrodes, each having a rectangular surface and four end faces, and a holding member which holds at least one (fixed end) of a pair of parallel ends (pair of ends) of four ends of the unit electrode corresponding to the four end faces in a state in which the unit electrodes are separated at a specific interval, and is capable of generating plasma upon application of voltage between the unit electrodes,

at least one of the opposing unit electrodes being a conductive-film-containing electrode including a ceramic body as a dielectric and a conductive film disposed inside the ceramic body, and

a distance "a" (mm) from an edge of the conductive film to an edge of the ceramic body on the other pair of parallel ends (other pair of ends) of the four ends of the conductive-film-containing electrode adjacent to the pair of ends and a thickness "c" (mm) of the ceramic body satisfying a relationship "$(c/2) \leq a \leq 5c$".

2. The plasma generating electrode according to claim 1, wherein a distance "b" (mm) from the edge of the conductive film to the edge of the ceramic body on the fixed end of the conductive-film-containing electrode and the thickness "c" (mm) of the ceramic body satisfy a relationship "$2c \leq b \leq 10c$".

3. The plasma generating electrode according to claim 1 or 2, wherein, when the pair of ends of the conductive-film-containing electrode has an end (free end) other than the fixed end, a distance "d" (mm) from the edge of the conductive film to the edge of the ceramic body on the free end and the thickness "c" (mm) of the ceramic body satisfy a relationship "$(c/2) \leq d \leq 5c$".

4. The plasma generating electrode according to any of claims 1 to 3, wherein the conductive film has a thickness of 5 to 30 μm.

5. The plasma generating electrode according to any of claims 1 to 4, wherein the ceramic body includes at least one ceramic selected from the group consisting of alumina, mullite, ceramic glass, zirconia, cordierite, silicon nitride, aluminum nitride, and glass.

6. The plasma generating electrode according to any of claims 1 to 5, wherein the conductive film includes at least one metal selected from the group consisting of tungsten, molybdenum, manganese, chromium, titanium, zirconium, nickel, iron, silver, copper, platinum, and palladium.

7. A plasma reactor comprising the plasma generating electrode according to any of claims 1 to 6, and a casing having a passage (gas passage) for a gas containing a specific component formed therein, wherein, when the gas is introduced into the gas passage of the casing, the specific component contained in the gas can be reacted using plasma generated by the plasma generating electrode.

8. The plasma reactor according to claim 7, comprising a pulsed power supply for applying voltage to the plasma generating electrode.

9. The plasma reactor according to claim 8, wherein the pulsed power supply includes at least one SI thyristor.